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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,433	08/08/2001	Jun Koyama	12732-064001	9952

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EXAMINER

MENGISTU, AMARE

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 01/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/923,433

Applicant(s)

KOYAMA ET AL.

Examiner

Amare Mengistu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10, 11, 15, 16, 30-37, 44-48, 50-54, 70-72, 74-78, 80 and 81 is/are pending in the application.
- 4a) Of the above claim(s) 9, 12-14, 17-29, 38-43, 49, 55-69, 73 and 79 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 11, 15, 16, 30-37, 44-48, 50-54, 70-72, 74-78, 80 and 81 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3&6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 9,12-14,17-29, 38-43,49-55-69,73,79 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected elected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8.
2. Applicant's election without traverse of species I in Paper No. 8 is acknowledged.
3. This application contains claims 9,12-14,17-29,38-43,49,55-69,73,79 are drawn to an invention nonelected with traverse in Paper No. 8. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Double Patenting

4. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

5. Claims 1-4,6,7,15-16,30-32,34-36,38-40,44-46,50-52 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 3 of prior U.S. Patent No. 09/969,591. This is a double patenting rejection.

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Claims 2-4, 6,7,15-16,30-32,34-36,38-40,44-46,50-52 are rejected since they depend on rejected claim 1.

6. Claims 1-4, 6,7,15-16,30-32,34-36,38-40,44-46,50-52 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1,6,20, of prior U.S. Patent No. 10/067,884. This is a double patenting rejection.

Claims 2-4, 6,7,15-16,30-32,34-36,38-40,44-46,50-52 are rejected since they depend on rejected claim 1.

7. Claims 1-4, 6,7,15-16,30-32,34-36,38-40,44-46,50-52 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 2,3,4,5,8,9 of prior U.S. Patent No. 09/919,832. This is a double patenting rejection.

Claims 2-4, 6,7,14-16,30-32,34-36,38-40,44-46,50-52 are rejected since they depend on rejected claim 1.

Claim Rejections - 35 USC § 112

8. Claim 5 recites the limitation "**said pixels stores digital signals**" in the last line. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claim 1 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by **NATANO MUTSUKE** et al (JP 41-0253941A) [see, fig.1].

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 2-8,15,16, 30-37; 44-48; 50-54,70-72,74,76,80,81 are rejected under 35 U.S.C. 103(a) as being unpatentable over **NATANO MUTSUKE** et al [JP 410253941A] in view of **Yokoyama** [us 2001/005193 A1].

13. In regard to claims 2-5,15,8,44-48, 70,74,76, 80; **NATANO MUTSUKE** (hereinafter **MUTSUKE**) discloses a liquid crystal display comprising pixels, wherein each of said pixels has n x m memory circuits [fig. 1(21,23)] and D/A converter [fig.1 (22)] for converting signals stored in said in one of the n x m memory circuits into analog signals [see, Abstract]. It is obvious that the memory circuits [fig.1 (21,23)] of **MUTSUKE** are formed over a glass substrate or a plastic substrate or a single crystal wafer, since LCD is made of one of these substrates.

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MUTSUKO has failed to teach that the digital signals stored corresponding to m frames stored in the n x m memory circuits also silent about having a plurality of TFTs and their connection. The patent of **Yokoyama** clearly teaches that it is well known for a pixel to have one or more storage device to store n bit of digital signals corresponding to m frames [see, Abstract; pages 2-3, [0024 –0027]. Furthermore, **Yokoyama** teaches that the pixel having plurality of TFTs [fig.6 (400;(410 and 420))] wherein each of gate electrodes is connected to one of n gate signals lines [fig.6 (410; 420)], and each of said n TFTs has a source and drain region, one of which is connected to source signal line [fig.6 (410,420); (61)] and the other of which is connected to an input terminal of one of said n memory circuits [fig.6 (411);(710)].

Therefore; it would have been obvious to one skill in the art at the time of the invention was made to have been motivated to combine a pixel having a plurality of memories to store digital signals as taught by **Yokoyama** into the display system of **MUTSUKO**, since this will allow to reduce the overall power consumption of the **MUTSUKO's** display system.

14. As to claims 6,7,30-37, 71-72,**MUTSUKO** teaches that the memory circuits and the D/A converter arranged to overlap a source/ gate signal lines [fig.1 (21,22,23)].

15. As to claim 16, 50-54; 75,81 **Yokoyama** teaches that the LCD can be used in a mobile phone [see, page 1 [0012]].

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16. Claims 10,11, 77, 78, are rejected under 35 U.S.C. 103(a) as being unpatentable over **MUTSUKO** in view of **Yokoyama** as applied to claims 1,5,8,70 and 76 above, and further in view of **Kinoshita et al** (5,771,031).

17. As to claims 10 and 11, **MUTSUKO** as modified by **Yokoyama** teaches LCD device a pixel having a plurality of memory circuits and D/A converter, but has failed to teach a source driving circuit including a shift registers, a first and a second latch circuits to hold n bit digital signals. However; the patent of **Kinoshita et al** is cited to teach that it is conventional for LCD source signal driving circuit to have a shift registers [fig.3 (SR (100 bits))], a first and a second latch to hold n bit digital signals from the shift registers [fig.3 (LA1; LA2)].

18. Therefore, it would have been obvious to one skill in the art at the time of the invention was made to have been motivated to incorporate the shift registers and the first and the second latches of **Kinoshita et al** into the display system of **MUTSUKO**, because this is an advantage to transfer data at a higher speed and reduce the costs for manufacturing a flat panel display.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amare Mengistu whose telephone number is (703) 305-4880. The examiner can normally be reached on M-F, T-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (703) 305-4938. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.



Amare Mengistu
Primary Examiner
Art Unit 2673

A.M

Jan.2, 2004